State of Louisiana
Louisiana Department of Natural Resources
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Comments to U.S. House of Representatives
Committee on Energy and Commerce
Hearing on
Hurricane Katrina's Effect on Gasoline Supply and Prices
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Introduction

Mr. Chairman, Mr. Ranking Member, and distinguished members of the House Committee on Energy and Commerce, thank you for your gracious invitation to address your Committee. Unfortunately, as you know, I come to you today with a somber heart from the frontlines of the worst natural disaster in our nation's history.

My home state will never be the same again, nor will America. Almost no enemy of this nation, or terrorist of any kind, could have wrought the terror and devastation to my state and to this nation as the fury of nature with the name of Katrina did on August 29 and the ensuing days. Overnight, upwards of a hundred thousand citizens of my state and our neighbors in Mississippi and Alabama lost everything they had — homes, jobs, businesses, cars, and for some, their very lives. Hundreds of thousands of others were dramatically affected to a lesser, but significant degree. Suddenly, we find ourselves in the midst of an ongoing crisis, faced with restoring the basic elements of civilization — food, safe drinking water, shelter, clothing, fuel, and sanitation.

I want you to know that the people of Louisiana are deeply touched by the outpouring of concern, prayers, help, and generosity from Americans from every walk of life from all over the country. To all of you, we give you our heartfelt thanks.

Now, I will focus on the subject of this hearing — the impact of Hurricane Katrina on gasoline and petroleum supplies.

Supplying the Nation: Louisiana – America's Energy Corridor

Louisiana has a long and distinguished history of oil and gas production, both onshore and offshore. Currently, approximately 34% of the nation's natural gas supply and almost 30% of the nation's crude oil supply is either produced in Louisiana, produced offshore Louisiana, or moves through the state and its coastal wetlands. Together with the infrastructure in the rest of the state, this production is connected to nearly 50% of the total refining capacity in the United States. Based on its energy producing value to the nation, acre for acre, Louisiana is the most valuable real-estate in the nation.

Louisiana has 17 petroleum refineries, most of them large, world scale facilities, with a combined crude oil distillation capacity of approximately 2.77 million barrels per calendar day, which is 16.2% of total U.S. refinery capacity of 17.1 million barrels per day, the second highest in the nation after our sister Gulf Coast state, Texas. Louisiana produces approximately 42.1 million gallons of gasoline per day and 29.9 million gallons of distillate fuel (that is, jet fuel and diesel fuel) per day. Two of the four Strategic Petroleum Reserve storage facilities are also in Louisiana. The other two are in Texas.

Louisiana is not some far off energy producing colony. Louisiana and its citizens are fundamental elements from which this great nation was forged. Dating back to Thomas Jefferson's signing of the Louisiana Purchase in 1803, Louisiana has indelibly stamped its mark on this country, becoming the 18th state in the Union in 1812. Even today, Louisiana has provided more national guardsmen to the war against terrorism in Afghanistan and Iraq than any other state, though we rank only 22nd in population. Approximately 41% of the continental land mass of the U.S. drains through Louisiana via the Mississippi River. The Port of greater New Orleans is the largest port in total tonnage the U.S., and the port of Baton Rouge is 10th.

When it comes to developing the nation's offshore petroleum resources, there simply would not be much if it were not for Louisiana's leadership and participation. The offshore territory off Louisiana's coast is the most extensively developed offshore territory in the entire world. As most of you know, the offshore area beyond 3 miles from Louisiana's coast is federal territory called the Outer Continental Shelf, or OCS. Other than in a 3-mile transition zone, the federal government receives ALL of the mineral revenue from production in the OCS. Based on 2004 data, OCS production off Louisiana's coast constitutes 91% of oil and 75% of natural gas production from all U.S. OCS areas combined. Additionally, Louisiana OCS territory has produced 88.8% of the 14.9 billion barrels of crude oil and condensate and 82.3% of the 150 trillion cubic feet of natural gas ever extracted from all federal OCS territories since the beginning of time.

<u>Offshore Energy Development and Economic Prosperity</u>

This service that Louisiana provides to the nation is one of the largest contributing factors to America's strategic security and economic prosperity, which make possible the high standard of living that we all enjoy in this country. Let's look at just one example of how this translates to you. Prior to Hurricane Katrina, the pump price of gasoline was already hitting the $2.50 per gallon range in many parts of the country. If it were not for Louisiana's role in the petroleum supply of the nation, you and your constituents would likely have been paying in the range of $4.00 per gallon for gasoline pre-Katrina, and more than that post-Katrina. And, that does not address how sky-high prices would be for electricity, food, and all of the other things fueled by, or made from, oil and natural gas.

Offshore petroleum production is not only good for the country, but it is essential to the well-being of the USA. Offshore production is also good for coastal producing states, and there are not many of us — coastal states, that is, that allow new production off our coasts. The list currently consists of only Alabama, Alaska, Mississippi, Louisiana, and Texas. Even without being able to share in the mineral revenue produced for the federal treasury off our coasts, offshore production produces economic prosperity for coastal states in the form of jobs for the service industries providing the logistics support for the offshore industry. This includes, among others: equipment and materials suppliers; food service; helicopter and boat transportation; communications services; engineers, geologists, boat and rig crews; other industry staff and employees; and many others. The offshore industry also supports many jobs far removed from the coastal states, including a multitude of employees who, because of the week on, week off type of schedules, commute up to 500 miles or more from places like Arkansas, Tennessee, and Georgia to work offshore in the Gulf.

Offshore Development Includes LNG

Stepping up to the plate to help the nation obtain new supplies of energy including LNG (liquefied natural gas), Louisiana is the home of the largest throughput facility (Southern Union in Lake Charles) of the four existing LNG import terminals in the U.S., and it is undergoing more than a doubling of capacity from 1 billion cubic feet per day to 2.5 billion cubic feet per day. While almost every state in the nation is trying to prevent the siting of any new LNG facilities, Louisiana is the site of the largest permitted LNG import terminal in the nation (Cheniere Energy's 2.6 billion cubic feet per day facility in Sabine Parish).

Offshore Development and Preserving the Environment Are Compatible

I am also here to tell you, that oil and gas production is compatible with protecting and preserving the environment. Louisiana can look at experience and footnote that offshore development and the associated onshore infrastructure construction and operations are done in an environmentally responsible way today and are done so under the oversight of several state and federal regulatory agencies.

Louisiana has suffered some negative impacts in the past from offshore production. And, yes, we still have to deal with some of those legacies of the past, but that is because Louisiana pioneered offshore production in the days before modern technology, before the awakening of America's environmental consciousness, and before the advent of environmental regulatory agencies and regulations.

Louisiana's first well (a dry hole) was drilled in 1868. Our first oil well was drilled in 1901. The first oil well over water in the world was in Louisiana in 1910 in Caddo Lake. The first well drilled off the coast of Louisiana was in 1938 near Creole, Louisiana. Louisiana was the site of the first well drilled out of sight of land in 1947. Things have changed dramatically since 1910, 1938, 1947, or even 1960, 1970, or 1980. Simply put, it was like the old Wild West out there. Just as in other industries in other parts of the country in other times, there was once a time, long ago, when almost anything in the name of progress was accepted. Everything is different now. That era and those practices have nothing more in common with modern exploration, production, and environmental techniques than transportation by horse and buggy in 1800's has in common with jet airliners flying overhead today.

The Consequences of Concentrating Oil & Gas Development in One Area

This country now faces an energy disaster of both short-term and long-term causes, implications, and solutions. Our present energy crisis is caused by the immediate effects of Hurricane Katrina, compounded by the long term consequence of decades of having had no meaningful energy policy, concentrating energy production and processing in the Gulf Coast area, the aversion to energy development in most other areas of the country, and this country's insatiable appetite for energy. The Energy Policy Act of 2005 (EPAct 2005) that was just enacted is a good step in the right direction, but it is not soon enough and not enough. For the foreseeable future, EPAct 2005 will not meaningfully reduce this country's increasing energy appetite. It will not reduce this country's increasing dependence on unreliable foreign sources of crude oil AND, NOW, liquefied natural gas. It will not significantly increase domestic energy supply or diversity. And it will not protect, much less rebuild, the Louisiana energy production infrastructure and the eroding and decimated coastal wetlands that protected and made the offshore production possible off Louisiana.

We are all familiar with the old adage, "Don't put all of your eggs in one basket." We all also know the reason for that: If you drop that basket, what are you going to do? Well, ladies and gentlemen, this nation's oil and gas offshore production, foreign import capability, refining, and basic petrochemical eggs have been placed in one basket called the Louisiana and the Gulf Coast, and that basket has not only been dropped, it has been run over by Hurricane Katrina.

I am not here to chastise anyone from those states that will not allow drilling off their coasts, or drilling rigs, petroleum refineries, or petrochemical plants in their states. What I am here to say is that since Louisiana has welcomed those facilities and operations and has become <u>America's</u> Energy Corridor, help us. And, by helping us, you are helping yourselves and all Americans.

Energy is the lifeblood of an industrialized nation and a prosperous society, and none is more of both than this country. The mainline artery supplying that sustaining life blood of oil, natural gas, petroleum products such as gasoline, jet fuel, and diesel fuel, is Louisiana. Louisiana has over 40,000 miles of pipelines just within our state as part of the infrastructure that receives offshore and foreign oil and gas, and feeds it through processing facilities, refineries, and petrochemical plants that then distribute it to the rest of the nation.

A Plan Needed To Rebuild Louisiana

Most of this offshore and onshore production is shutdown, and much of the onshore infrastructure is either shutdown, damaged, destroyed, or underwater. We will not know the full extent of either the short-term or long-term damage for some time. Until that information is available, a reasonable assessment of the cost and time to repair or replace it and to restore energy flow to the pre-storm level will not be known.

Here are just a few of the challenges we face in even determining the damage:

The communications infrastructure is in ruins.
Telephone lines, cell phone towers, radio towers, repeaters and remote data telemetry are either destroyed or have no power.
Advance rescue and assessment teams have to resort to carrying in satellite phones just to communicate from sites they are able to reach.
Accessibility to wells, pipeline pumping stations, and processing facilities is limited by flood waters, downed trees, washed out roads, lack of vehicle fuel and other impediments.
Complicating this even further, hundreds of thousands of people have been dislocated to other cities throughout Louisiana and other states.

The people who are most familiar with the damaged areas and who operate the affected oil and gas facilities are among the hundreds of thousands of displaced citizens.

Untold tens of thousands, or even hundreds of thousands of these evacuees cannot return to homes for months, if they still have homes to return to. Even the facilities that can be restarted and operated soon, need the people who operate them, and those people need food, water, and a place to live. The people and their needs cannot be separated from the infrastructure.

Refineries are shut down, wells are shut in, and bodies are floating in the streets. As the floodwaters recede, fires are burning uncontrolled in New Orleans because there are no firefighters to put them out. Businesses have been destroyed. Most of the oil and gas exploration and development onshore in Louisiana, and a large portion in the shallow waters offshore are done by independent companies. These are small operations, many with only a half dozen to a couple of dozen employees. These people would be your typical neighbors, not large corporations with extensive resources. Without help, many of them will never drill another well, because their employees are dislocated, their equipment ruined, their offices and workshops destroyed, and their financial resources gone.

It is expected that unemployment in Louisiana has almost overnight, jumped to about 25%. Tens of thousands of people who once had jobs, many in the oil and gas industry, have now lost homes, jobs, or both.

These are extraordinary times, and extraordinary times call for extraordinary measures. Louisiana needs the rest of America more now than ever before, and America needs Louisiana and its lifeblood energy supply more now than ever before. The U.S. had a Marshall Plan to rebuild Germany, the defeated enemy, after World War II; the U.S. now needs to institute a massive rebuilding plan for its own people in Louisiana, Mississippi, and Alabama.

<u>A Rebuild Program from the Past to Inspire Us Today</u>

In 1932, there was a cry for help from a desperate people near panic. The nation turned to its leaders searching for an end to the rampant unemployment and economic chaos that gripped the country. They were not disappointed. A plan was needed to fight soil erosion and declining timber resources, utilizing the unemployed of large urban areas. Congress and the President initiated several actions, one of which was the Emergency Conservation Work (ECW) Act, more commonly known as the Civilian Conservation Corps. With this action, two wasted resources were brought to bear, the young men and the land, in an effort to save both.

President Roosevelt called the 73rd Congress into Emergency Session on March 9, 1933, to hear and authorize the program. It included recruiting thousands of unemployed young men, enrolling them in a peacetime army, and sending them into battle against destruction and erosion of the nation's natural resources. Before it was over, over three million young men engaged in a massive salvage and public works operation. We are all familiar with the public works facilities these hard working men built throughout the country. These facilities — post offices, other public buildings, roads, parks, fire towers, telephone lines and many other facilities that Americans still use today.

A massive rebuilding program is needed to replace and restore all that Katrina destroyed. This includes the whole infrastructure of a modern civilization such as housing, public buildings, communications, energy production facilities, offices, etc. As the infrastructure is rebuilt and financial assistance is provided, more businesses can be reopened, creating more jobs, reducing unemployment, and restarting the decimated economy of the area. Today, skilled, hard-working men and women of Louisiana, who until a few days ago, were going to their jobs and returning home each day, need America's help, not charity, to restore those jobs, homes, and lives.

Maybe the legacies of the Marshall Plan and the Civilian Conservation Corps can serve as an inspiration for developing the rebuild program direly needed today for Louisiana, Mississippi, and Alabama.

Louisiana's Role as a Producing and Consuming State

A reliable and affordable supply of energy is necessary for economic development, prosperity, and expansion. Although technological improvements and investments in energy efficiency have reduced this country's energy consumption per unit of Gross Domestic Product over the past 20 years, increased economic prosperity is still dependent on increased energy consumption. In the U.S., the availability of energy has generally been taken for granted, but recent blackouts in California and other parts of the country, the emergence of 70 plus dollar per barrel oil and $11 to $12 per million BTU natural gas, and the drive to build terminals to import foreign natural gas in the form of a cryogenic liquid, have highlighted the need for addressing energy supply.

I come to you representing a state to which energy is its middle name. The words Louisiana and energy are almost synonymous. Among the 50 states, Louisiana ranks (2004 Energy Information Administration - EIA data):

1st in crude oil production
2nd in natural gas production
2nd in total energy production from all sources

The importance of energy to Louisiana is further highlighted in the following rankings in which Louisiana is (2003 EIA data latest available):

2nd in petroleum refining capacity
2nd in primary petrochemical production
3rd in industrial energy consumption
3rd in natural gas consumption
5th in petroleum consumption
8th in total energy consumption
But, only 22nd in residential energy consumption

Usually, when national energy issues are discussed, Louisiana is cast in the image of a rich producing state floating in a sea of oil and gas that is being inequitably shared with the consuming states. Often misunderstood or overlooked, is the fact that about two thirds of the production from the state is in the Louisiana federal OCS territory and, hence, produces no revenue for the state, while at the same time incurring significant infrastructure support costs to the state, which I will discuss in more detail later.

Also often overlooked or not explained, is the fact that, though Louisiana is the 2nd highest energy producing state in the nation, Louisiana is also 8th highest in total energy consumption.

Therefore, Louisiana is more of a consuming state than 42 other states! This story is never told, nor are Louisiana's difficulties as a key consuming state given much concern at the federal energy policy level. Thus, when Louisiana, the energy producing state speaks, it is also Louisiana, the energy consuming state speaking. Louisiana is inexorably tied into the issues of all states in the nation, whether considered producing states or consuming states. However goes the energy situation in Louisiana, so goes the energy situation in the United States of America, and things are not going well for Louisiana today.

Louisiana’s Role as a Through-Processor of Hydrocarbons for the Nation

All of the preceding represents only the direct supply line of oil and natural gas. Additionally, Louisiana’s 8^{th} highest ranking among the states in energy consumption is attributable to the fact that Louisiana is consuming most of this energy as a through-processor of energy supplies for the rest of the nation, consuming colossal amounts of energy for their benefit.

An example of how Louisiana is consuming energy resources for the primary benefit of other states is petroleum refining. The energy equivalent of 10% of Louisiana's entire petroleum product consumption is required just to fuel the processes that refine crude oil into gasoline, diesel fuel, jet fuel, heating oil and other products consumed out of state. The oil refining industry employs only about 10,400 workers in the state; whereas tens of millions of jobs throughout the country are dependent on the affordability and availability of the products from the continued operation of these refineries and associated petrochemical facilities in Louisiana.

Many other examples could be cited of the numerous energy intensive natural gas and oil derived chemical products Louisiana (and also Texas, Oklahoma, and California) through-processes for the rest of the U.S. Per unit of output, these industrial processes in Louisiana are characterized as capital (equipment), energy, raw material, and pollution discharge intensive, and low in labor requirements and dollar value added, essentially the opposite of the downstream industries in other states that upgrade these chemicals into ultimate end products. Much of the energy Louisiana technically consumes is really the transformation of oil and gas into primary chemical building blocks that are shipped to other states where the final products are made, whether it be plastic toys, pharmaceuticals, automobile dash boards, bumpers and upholstery, electronic components and cabinets, synthetic fibers, or thousands of other products dependent on this flow of energy and high energy content materials out of Louisiana.

OCS Infrastructure and Its Impacts and Needs

It is important to understand that there is no free lunch. Louisiana, like other coastal producing states, sustains impacts on coastal communities and bears the costs of onshore infrastructure required to support this production activity.

Saving Louisiana’s Wetlands that Protect Offshore and Onshore Production Infrastructure

Louisiana’s unique and fragile coastal wetlands introduce yet an additional issue: land loss. Prior to Hurricane Katrina, Louisiana was losing more than 24 square miles of our coastal land each year. In fact, if what is happening today in coastal Louisiana were happening in our nation’s capital, the Potomac River would be washing away the steps of the Capitol today, the

White House next year, and the Pentagon soon after that. In fact, during the course of this morning alone, Louisiana will lose a football field wide area from the Capitol Building to the Washington Monument. It is feared that the ferocity of Hurricane Katrina may have accelerated the land loss by several years.

There are many causes of this coastal erosion in Louisiana, including what may be the most significant factor: building levees and channeling the Mississippi River. Whatever the cause of its demise, the health and restoration of Louisiana's coastal wetlands are vital to protecting the offshore and onshore infrastructure that is essential for the continuation, as well as the expansion, of offshore energy production in the Gulf of Mexico.

Once the State realized the magnitude of the coastal erosion problem, we got serious about doing something about it. In 1980, the coastal restoration permitting program was moved to the Department of Natural Resources (DNR). In 1981, $40 million of state oil and gas revenue was set aside in a legislative trust fund for coastal restoration projects. The State has a dedicated revenue stream of up to $25 million per year, depending on the level of revenue collections from oil and gas production within the state, to replenish the fund. In the past few years, that replenishment stream has been at the $25 million level. In 1989, the Office of Coastal Restoration and Management was created in DNR, and the magnitude of the program was greatly expanded.

The War against the Elements

Let me emphasize something extremely important to this nation's energy supply. Here along the coast, WE ARE AT WAR. It is a war in which the enemy is nature. It is an enemy with names like Andrew, Ivan, Dennis, and Katrina — hurricanes. It is an enemy with names like wave erosion, storm surges, sedimentary subsidence, soil consolidation, salt water intrusion, and leveeing of the Mississippi River. As Hurricane Katrina demonstrated last week, it is a war we are losing in Louisiana.

Prior to Hurricane Katrina, Louisiana needed a minimum of $14 billion (in today's dollars) over the next 20 to 30 years for coastal restoration projects. Louisiana has quite a unique geology relative to the rest of the country. The Louisiana coast is geologically the youngest part of the U.S. and, prior to manmade interference from leveeing and channeling the Mississippi River and other activities, was still accreting land mass faster than it was losing it to subsidence, erosion, salt water intrusion, sea level rise from global warming, and other causes. The science of coastal geology and the expertise of coastal engineering to counter these forces is in its infancy, as it has never in the history of civilization, been attempted on the scale it must be implemented in South Louisiana. Also, we are dealing with a situation that is continuously subject to changing dynamics, such as more frequent and more powerful hurricanes, the apparently increasing effects of global warming, etc.

Extent of Louisiana Infrastructure Supporting OCS Production

The total value of the Louisiana OCS infrastructure and the onshore infrastructure supporting it is difficult to ascertain. The estimated depreciated investment in offshore production facilities is over $85 billion, depreciated offshore pipeline infrastructure is over $10 billion, and public coastal port facilities is $2 billion, for a total of approximately $100 billion, depreciated, and not counting highways, sewer, water, fire and police protection, schools, and other public works structures that also have ongoing operation and maintenance costs. The replacement of all of this would be several times the $100 billion depreciated figure. It also does not count the onshore coastal infrastructure of pipelines, storage facilities, pumping stations, processing facilities, etc.

This infrastructure is vulnerable if not protected by the State's barrier islands and marshes. As these erode and disappear, infrastructure is exposed to the open sea and all of its fury. As the coast recedes, near shore facilities become further offshore and subject to greater forces of nature, including subsidence, currents, and mudslides. Erosion in the coastal zone is already beginning to expose pipelines that were once buried.

<u>A Wake-up Call from Hurricane Ivan</u>

To bring home the point of infrastructure vulnerability, we need only look back to this past Summer. Hurricane Ivan was not even a direct hit on Louisiana's offshore and coastal oil and gas infrastructure, striking two states away; yet, its effects on the nation's supply of oil and gas were significant, even many months after it hit. Most of the damage occurred along pipeline routes rather than actual structural damage to the producing platforms. As of February 14, 2005, when the Minerals Management Service (MMS) released its final impact report on Ivan, 7.42% of daily oil production and 1.19% of daily gas production in the Gulf of Mexico was still shut-in. The cumulative shut-in production through February 14 was 43.8 million barrels or 7.25% of annual Gulf of Mexico OCS production and 172.3 billion cubic feet of natural gas or 3.9% of annual Gulf of Mexico OCS gas production.

With Katrina, that infrastructure has sustained a direct hit. As of Saturday, September 3, the Minerals Management Service (MMS) reported that 70% of manned platforms and 71% of the drilling rigs in the Gulf were not operating. Saturday's shut-in oil production was 1.2 million barrels per day, or 79% of Gulf production. Shut-in gas production in the Gulf was 5.8 billion cubic feet per day, or 58% of daily gas production in the Gulf.

Also, as of noon Sunday, 7 refineries in Louisiana and 1 in Mississippi were still shutdown from storm damage and / or lack of electric power. An additional 4 refineries in Louisiana were operating at reduced rates due to storm damage or lack of crude supply.

As more of the protection from Louisiana's barrier islands and coastal wetlands wash away, increasingly more onshore and offshore production will be damaged or destroyed by even less powerful storms than Ivan and Katrina, and particularly by storms whose paths more directly pass through the producing areas off of Louisiana's coast, as did Katrina. Direct hits to the prime production area by hurricanes and tropical storms will cause incalculable damage to this production infrastructure, as well as to the onshore support infrastructure, as Katrina is proving.

How to Increase Offshore Energy Production

Share Offshore Revenue with the States that Allow Offshore Production

The most effective way to help is to assist those states that make offshore energy production possible off their coasts. This can be accomplished by sharing with those coastal producing states some of the offshore revenues generated off their coasts. This would encourage those states to pursue more development, and it would help offset infrastructure costs those states incur that is associated with that development. Louisiana, like other coastal producing states, sustains impacts on coastal communities and bears the costs of onshore infrastructure to support this production activity.

When states like Wyoming, New Mexico, Colorado, and others host drilling on federal lands onshore, they receive 50% of those revenues in direct payments, and consequently have the financial resources to support that infrastructure. In Fiscal Year 2004, Wyoming and New Mexico together received about $928 million from those revenues, which IS an appropriate revenue sharing procedure.

In contrast, for example in 2001, of the $7.5 BILLION in revenues produced in the federal OCS area, only a fraction of one percent came back to those coastal states. The inequity is truly profound.

We are pleased this committee is investigating gasoline supply and pricing. The need to sustain the existing supply that Louisiana provides must simultaneously be addressed. The most effective answer to both issues is to share offshore revenues with the coastal producing states that make that production possible. It is critical that coastal producing states receive a fair share of revenues to build and maintain onshore infrastructure and, in Louisiana's case, to help stem our dramatic land loss, which is occurring at a rate believed to be the fastest on the planet.

Production off Louisiana shores alone contributes an average of $5 BILLION dollars a year to the federal treasury, its second largest source of revenue. And, that was when oil was less than half of the $60 plus per barrel price it is selling for today.

Does it not make sense to encourage the coastal producing states which provide that revenue for the benefit of the rest of the nation? Does it not make sense, that when so many, like the U.S. Ocean Commission, are targeting offshore OCS revenues to pay for worthwhile preservation of natural resources, that this nation first protect those who make these resources possible?

Prior to Katrina, in Louisiana's coastal zone, many of the pipelines and other infrastructure that our wetlands have historically protected had become exposed to open Gulf of Mexico conditions. I shudder to think of the extent of production infrastructure damage that we will learn that Katrina caused once we are able to get a full damage assessment.

To maintain, much less increase, production from off our coasts, we must reinvest in the infrastructure that makes all of the activity possible, whether it be port facilities, roads to transport equipment and supplies, erosion control, or barrier island and wetlands storm protection.

Assistance from the Energy Policy Act of 2005

The Coastal Impact Assistance Money provided in the Energy Policy Act of 2005 that you just helped pass is tremendously good news for the state's coastal restoration efforts. Yet, the $540 million provided over four years for coastal restoration is only a drop in the bucket compared to the total of $14 billion needed, prior to Katrina, over 20 to 30 years for Louisiana's unique coastal restoration needs.

Enact Legislation to Extend Section 29 Tax Credits to Deep and Ultra-Deep Production in States Allowing Offshore Production

Section 29 of the Internal Revenue Service (IRS) Code granted a tax credit for the production of natural gas from unconventional resources (coal bed methane and tight sands gas). The effect of the application to coal bed methane gas production was astounding in those areas of the country that have significant deposits of this kind, which is not along the Gulf Coast. Natural gas reserves from coal bed methane rose from 6.3% of U. S. reserves at the end of 1993 to 9.9% at the end of 2003. Annual natural gas production from coal bed methane rose from 4.2% of U. S. dry gas production in 1993 to 8.2% by the end of 2003.

Deep natural gas reserves (15,000-24,999 feet sub-surface) and ultra-deep gas reserves (greater than 25,000 feet sub-surface) are the most immediately available resources capable of providing a substantial increase in domestic production of natural gas. Substantial deep gas reserves are known to exist, and a deep gas well can have the productive capacity many fold over that of coal seam wells and as much as five to ten times that of conventional shallower wells. For example, a typical coal seam gas well may produce 100,000 cubic feet (CF) per day, a good conventional 15,000 foot well could produce 1 to 2 million CF per day, and a deep gas well could produce in excess of 50 million CF per day. The richest deep gas domain known in the U.S. underlies the onshore area and adjacent offshore shallow water shelf of the Gulf of Mexico. A 1998 study of the Potential Gas Committee put estimates of the U.S. deep gas resource base at possibly 170 Trillion Cubic Feet. The deep gas domain along the Gulf Coast underlies the existing surface infrastructure of pipelines, gas processing plants, and other drilling / production support infrastructure to move this gas into the U.S. gas supply immediately.

One problem is that, while productivity increases with depth in elevated reservoir pressure wells, drilling costs rise exponentially with well depth, and the drilling of one deep well takes a year or more. For example, conventional wells less than 15,000 feet normally cost between $100,000 and $2 million to drill. The deeper 15,000, plus foot range wells average around $6 million, 20,000 foot wells about $16 million, and 25,000 to 30,000 foot wells are in the range of $25 million, plus. Hence, the capital at risk for a dry hole is substantial, which makes the ability to fund such ventures difficult. Additionally, deep wells require leading edge drilling technology. Due to the limited amount of deep drilling done, few companies have the experience, technological capabilities, and financial resources to undertake this high return, but high risk activity. Of the few companies that have the ability to drill in this domain, most are the major oil companies, who have focused their financial resources on the more lucrative oil reserves of the deep water Gulf and drilling in foreign countries. Substantial new financial incentives could significantly reduce the entry hurtle, increase the reward to risk ratio, and reduce barriers to capital access, particularly for the independent companies who now do most of the onshore drilling in this country.

Immediately Share with the States A Percentage of Royalties from Deep Drilling in the Shallow Waters of the Gulf:

Another thing that is needed immediately, is to share with coastal producing states 50% of the royalties from new deep drilling in the shallow federal waters on the shelf. The MMS royalty deep shelf suspension program is a good program, but it is draining investment from our parishes by shifting drilling across the boundary line into federal waters, causing loss of investment and tax revenue from lost drilling in state territory. Louisiana should receive a substantive percentage of royalties from deep drilling on the shelf immediately.

Encourage New Energy Sources and Technology

Recent studies show that the Gulf of Mexico has a significant wind energy potential. Although wind power does not have the energy density of petroleum, it is an inexhaustible, renewable source of clean energy. Again, much to my consternation, it appears that there are many parts of the country that use a lot of energy and want it at low prices, but do not want production of any kind, anywhere near them, including wind energy. Again, Louisiana is stepping up to help encourage this clean energy source. The State of Louisiana is currently working with private sector investors who are interested in developing wind farms in state and federal waters off Louisiana's coasts. My office submitted wind power legislation which the Louisiana Legislature passed earlier this year to facilitate offshore wind power development in Louisiana's State offshore waters.

Natural gas hydrates probably offer the greatest untapped energy resource the nation has. ***The Oil and Gas Journal*** recently reported that the U.S. Geological Survey estimates that methane hydrate deposits are greater than all other forms of fossil fuels combined. Large deposits of gas hydrates are believed to lie below the offshore waters of the U.S. Unfortunately, technology to tap these resources needs to be developed. Once the technology is available, the first areas to be developed will be the areas adjacent to the existing offshore producing areas where the infrastructure is in place to get it to shore and into the nation's pipeline distribution system. The federal government needs to fund meaningful research into developing the technology to produce gas hydrates, assessing the resource base, and delivering it.

In Conclusion

It is vital to the nation's security and prosperity that new energy sources be developed. The federal government has proven that it has the ability to steer investment, as in the case of deep water drilling in the Gulf and coal seam gas. In addition to its significance in producing 30% of oil and 23% of natural gas produced domestically, which is mostly off Louisiana, the OCS is probably the single most promising area for the U.S. to obtain significant new energy supplies. These supplies, whether conventional oil and gas, imported oil, imported LNG, wind and ocean energy, or gas hydrates, need the support of coastal states to cooperate and to supply and maintain critical production and support infrastructure.

LNG facilities are being built where the existing U.S. pipeline infrastructure exists (essentially Louisiana and Texas) in order to get the gas from the coast into the delivery system to supply the nation. The same will be true when the technology is developed to commercialize methane hydrate production off the coasts. This Louisiana and Texas infrastructure will also be used when deep and ultra-deep shelf production comes on stream. This is another reason why offshore revenue should be shared with the coastal producing states and why the extension of Section 29 tax credits should be extended to deep gas exploration at least in the states that are allowing onshore and offshore drilling and allowing the siting of LNG facilities to make energy available to the rest of the country.

With effective policies and incentives, the federal government can steer investment into the offshore areas, and by receiving an equitable share of revenue generated offshore, the coastal producing states can be in a position to ensure that this production will be made available to the rest of the nation. Louisiana desperately needs immediate revenue sharing financial assistance from a source not subject to annual appropriations, to continue to maintain existing, and to develop future energy supplies for the nation.

Although the Congress enacted national energy legislation that included direct payments to the coastal producing states for four years for coastal impact assistance, it did not enact true sharing of OCS revenues on a permanent basis that would be similar to the automatic payments for drilling on federal lands onshore. This must be addressed.

Now that Hurricane Katrina has laid waste to Louisiana's largest city, the entire southeastern portion of the state, the state's coastal oil and gas infrastructure and its protective wetlands, a massive national rescue and rebuilding program is imperative to bring the state back from this crisis and to enable us to continue to supply a critically needed portion of this nations energy needs.

Thank you for this opportunity to appear before you.

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